Transportation in Wisconsin...
a vision for the 21st century

The quality of life of all Wisconsin residents is greatly influenced by the state's transportation system. Everything—from our daily commute to work, to the food we eat, to the merchandise we purchase, to the area in which we choose to live—is greatly affected by the transportation decisions made at the state and local level.

Wisconsin enjoys an outstanding transportation system, but to ensure that the system is able to continue to support and improve our quality of life and strong economy, we will have to address many transportation needs in the new millennium. Some of these needs require immediate attention to fix the problems we have right now. Others require long-term strategies to respond to the obstacles that will emerge in the future. Addressing these needs will present considerable challenges that must be overcome if Wisconsin intends to continue providing residents with an efficient, safe, and modern transportation system that offers transportation choices for both people and products.

Addressing critical needs

- Over 30% of our state highway pavement and 10% of our bridges currently need to be rebuilt or replaced.
- Nearly 20% of the state's most important routes, which make up the backbone of the state highway system, are currently congested.
- Relieving existing congestion problems will require the commitment of all the expansion-related funding estimated to be available through 2007.
- Almost all of the freeways in southeastern Wisconsin will have to be replaced over the next 20 years.
- Much of the state's 100,000 miles of local roads and streets are facing the same aging infrastructure needs as the state highway system.
- The rail infrastructure within the state will need to be upgraded to accommodate heavier loads, higher speeds and increased frequency demands.
- Runways at a number of existing airports are not capable of accommodating the larger aircraft and additional flights required by the rapidly expanding Wisconsin business sector.
- Nearly 750 people died on Wisconsin roadways during the past year. This number could rise to over 1,000 by 2020 if the current fatality rate remains the same.
- In many areas of the state there are a lack of transportation choices available to the general public.
- It is essential that environmental concerns are adequately addressed when making short- and long-term transportation decisions.

The beginning of the new millennium marks a critical period for transportation in Wisconsin. In order to continue to maintain and improve our quality of life, we must address these critical needs to keep our transportation system moving forward.

Preserving and replacing an aging infrastructure

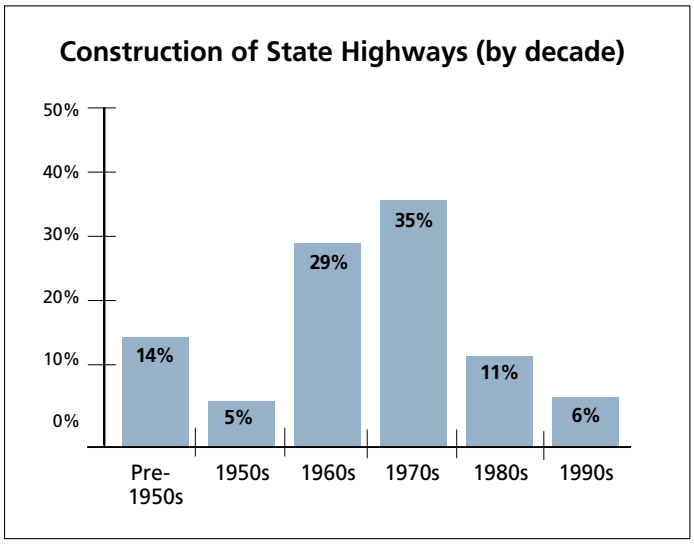
Perhaps the most pressing problem currently facing residents is the state's aging transportation infrastructure. Many of our highways were built in the 1960s and 1970s. Highways and bridges face increasing pressures as more traffic and larger trucks cause more wear and tear. Over 30% of our state highway pavement and 10% of our bridges need to be rebuilt or replaced today. An even larger need looms in the future. Even with proper maintenance, the average pavement life is approximately 40 years and the average life of a bridge is about 70 years. Therefore almost the entire highway system and a significant number of bridges will need to be replaced by 2020.

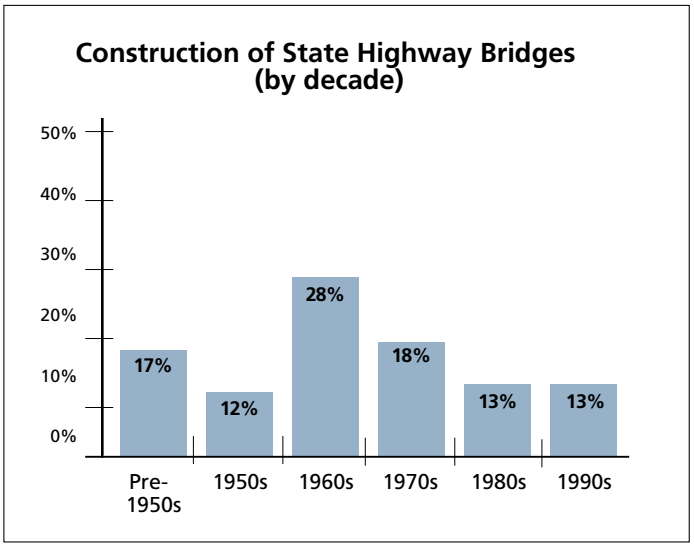
If we do not preserve our existing highway system, not only will it continue to deteriorate, but the actual cost of operating it over time will be greater as more frequent short-term maintenance will be required to keep the system functioning. This will definitely affect people's ability to travel freely throughout the state as motorists face more frequent disruptions because of travel restrictions on highways and bridges.

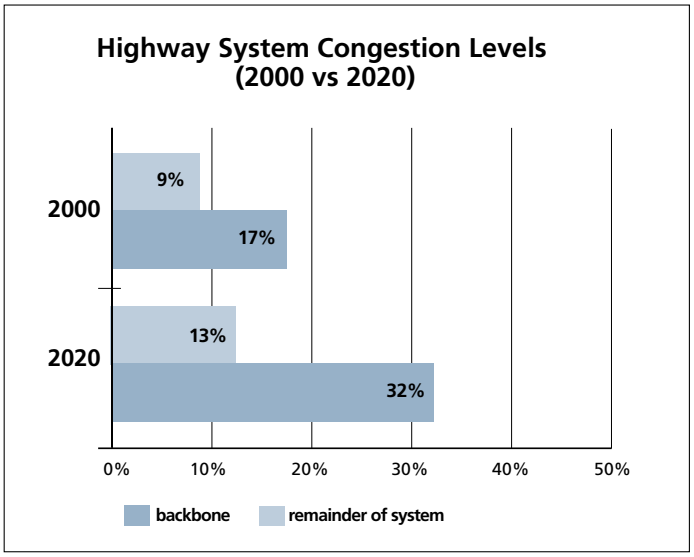
With regard to the railroad industry, Wisconsin freight carriers are currently facing a need to upgrade their infrastructure to meet constantly increasing load capacity requirements. At the same time, passenger service providers are looking for ways to increase speeds and frequencies along existing freight routes without reducing the freight carriers' ability to provide service.

Dealing with congestion

Another need requiring immediate attention is traffic congestion on the state highway system. Even though state highways comprise only one-tenth of all roads in Wisconsin, they carry nearly two-thirds of statewide traffic. Since 1982, travel on Wisconsin's state highway system has increased by 60%, while the number of miles of new lanes







added to the system has only grown by about 5%. As a result, nearly 20% of the state's most important routes, which make up the backbone of the state highway system, are currently congested. In the future, traffic will continue to increase. If significant improvements are not made to the traffic-carrying capacity of the state highway system between now and 2020, the total miles of congested roadways will nearly double. This could create serious safety and economic impacts as increasing congestion affects the transportation system's ability to move people and goods.

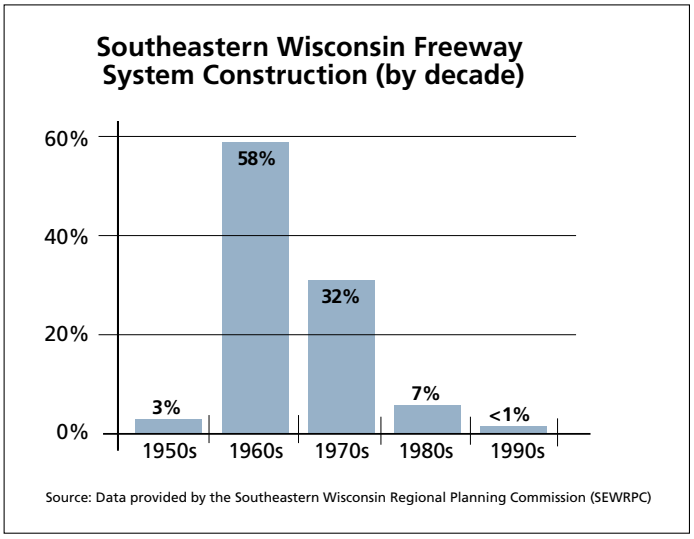
Congestion is not only a highway issue, it can also affect other modes such as air and rail travel. With the rapidly expanding demands of Wisconsin businesses, many communities are realizing that their existing airport runways are no longer capable of accommodating the larger aircraft and additional flights required by this increased economic activity.

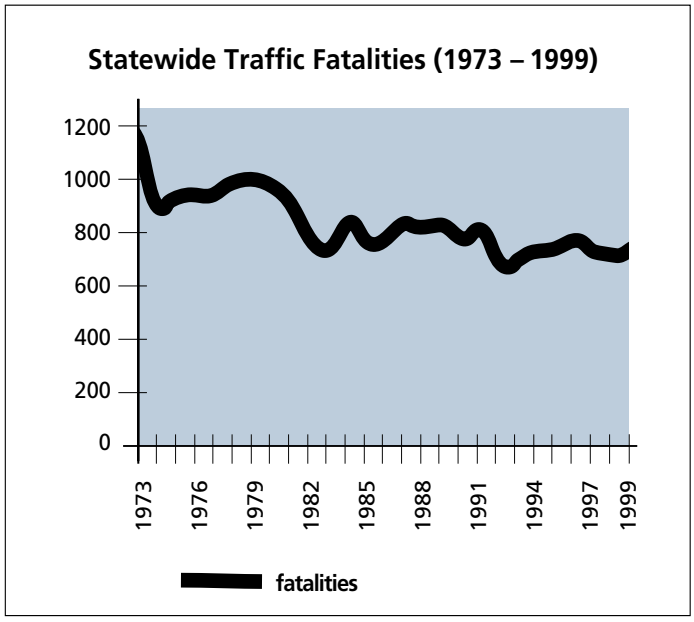
Similarly, with regard to passenger rail, the higher speeds and increased frequency demands anticipated over the next couple decades will continue to place additional strain on the rail infrastructure within the state.

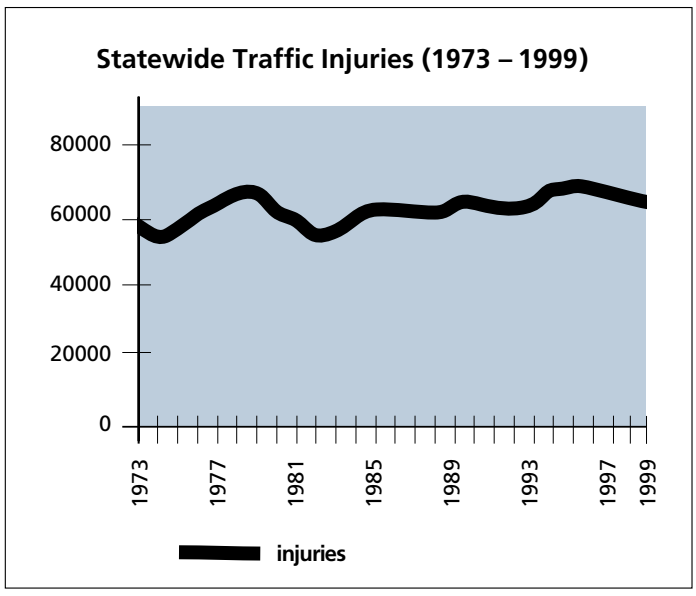
Rebuilding southeastern Wisconsin freeways

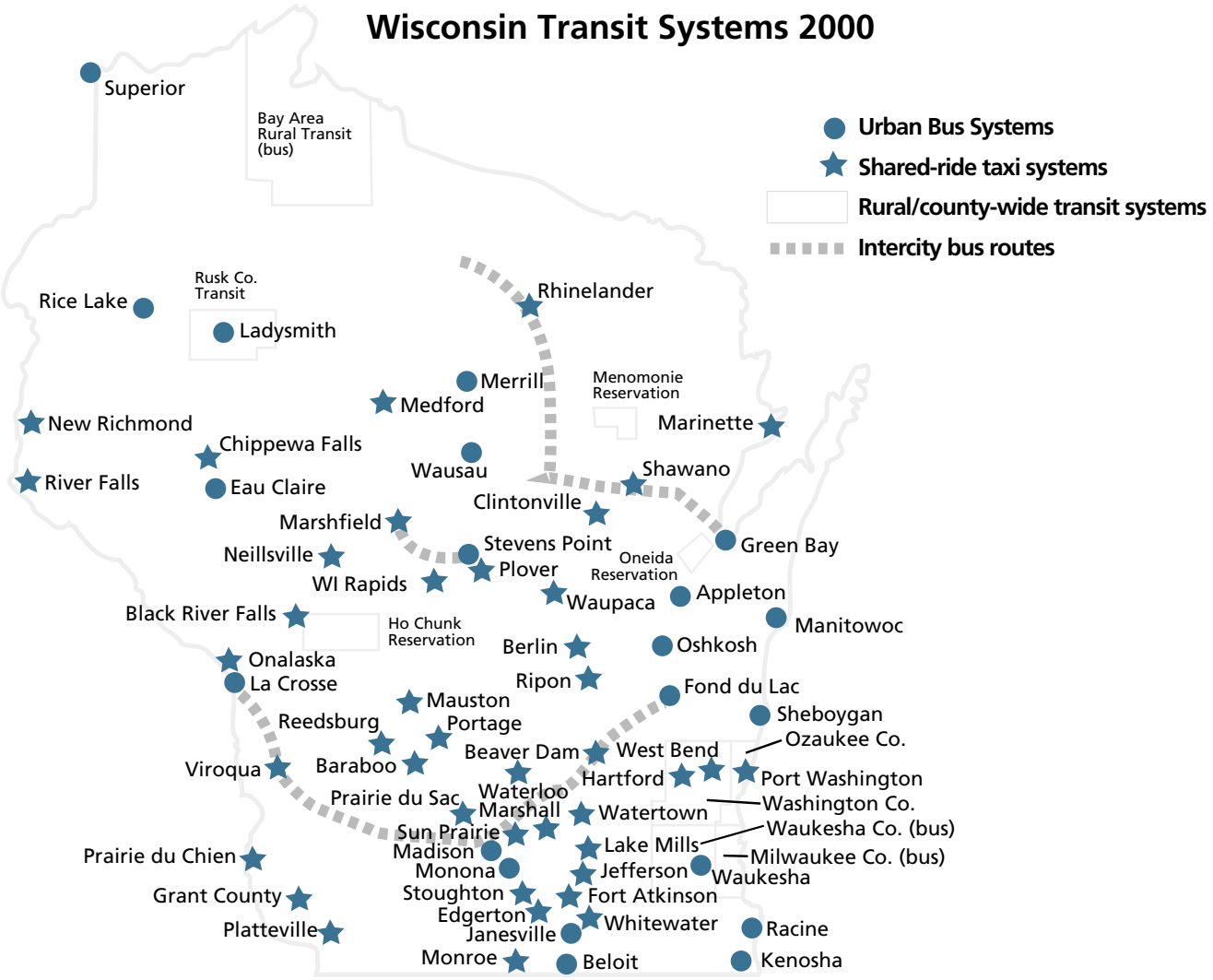
The freeways in southeastern Wisconsin are extremely critical to the state's overall economic well-being. They act as a gateway for major truck and tourism traffic to the northern, central and eastern portions of Wisconsin, as well as neighboring states. However, they are constantly having to accommodate increased travel. For example, since 1980, the number of vehicles entering Milwaukee County has increased by almost 40%. This constitutes about 16,000 more trips each day. It is not surprising that travel increases are taking their toll on these freeways, by wearing out pavement and bridges and increasing congestion.

Most southeastern freeways are 30 to 40 years old and are nearing the end of their useful life. They were not designed to handle the level of traffic that they carry now. Almost all of the freeways in southeastern Wisconsin will have to be replaced over the next 20 years. If some highway capacity is not added as part of this work, nearly half of all of these freeway miles will be congested by 2020. The cost required to adequately address their rehabilitation and congestion









needs over this period will be substantial. Current estimates are in the neighborhood of $5.5 billion, including $550 million needed to reconstruct the Marquette Interchange over the next few years.

Maintaining safety

Wisconsin roadways are much safer today than in past decades. Better road and vehicle designs, fewer obstacles, and increased enforcement have helped to drastically reduce the state's fatality rate. However, the fact remains that nearly 750 people died on Wisconsin roadways in 1999. Given the expected increase of vehicle travel over the next 20 years, this number could rise to over 1,000 if the current fatality rate does not continue to decrease substantially. The potential for such an increase in fatalities demonstrates the importance of enhancing current engineering, education and enforcement efforts. Additionally, when designing roadways, it is also important to consider safety needs on complementary bicycle and pedestrian facilities to reduce the potential for injuries and fatalities.

Beyond highways, safety issues also need to be addressed in other modes of travel. Increased activities on all state rail lines have revealed the need for a number of safety improvements such as additional grade separations and improved warning devices at highway/rail crossings. Additionally, the runway approaches at a number of Wisconsin airports have obstructions that must be addressed to assure safe operation.

Providing transportation choices

The state of Wisconsin has a responsibility to provide a choice of transportation alternatives to all state residents.

For example, citizens should have access to a transportation system that allows them to choose whether they want to drive, take the train, ride the bus, bike or walk. Our system currently provides people with some choices beyond automobiles, but we need to expand and improve those choices to respond to the growing demand from those who can not, or choose not to drive. A recent government study estimated that over a third of households in southeastern Wisconsin currently do not have an automobile. These individuals need to be provided accessible and affordable alternative forms of transportation to carry out their daily activities. Looking into the future, by 2020 the number of state residents over 65 is projected to increase by over 50%. This aging of the population will require more choices of transportation including intercity bus, rail, pedestrian, and bicycle travel. To respond to these needs, the state must give strong consideration to modes of transportation other than highways when considering the future needs of its residents.

Current efforts to implement high speed passenger rail service from Milwaukee to Madison, as part of a larger Midwest Regional Rail System, is one example of an attempt to provide travelers with more choices. However, a transportation alternative such as this is not cheap. The estimated cost of implementing this rail service from Madison to Milwaukee by 2003 is approximately $116 million.

Supporting local roads

Wisconsin's healthy economy has also caused increased commuter and commercial demand on local roads and streets. Much of the state's 100,000 miles of local roads are facing the same aging infrastructure needs as the state highways. Furthermore, an ever-increasing number of local roads are experiencing congestion problems as communities continue to grow.

Because it is essential that state highways and local roads and streets work in unison, the state has to continue to provide funding to local units of governments to help support construction, improvement and maintenance of locally owned highways, roads, streets and bridges. As is the case with the state highway system, it is likely that demands on local roads and streets will continue to grow in the future.

Meeting transportation challenges

Many challenges exist for Wisconsin as it attempts to maintain a viable transportation system. Possibly the largest will be securing enough funding to satisfy the substantial short- and long-term requirements of a statewide transportation system; in particular, making appropriate decisions about the distribution of available funds. Other major challenges include considering impacts on the environment and to communities when making transportation improvements.

Securing needed funding

Federal funds make up over a quarter of the state's total transportation funding. In the past, these funds have fluctuated substantially and have not always kept up with inflation. Likewise, state revenues, though they have been somewhat more consistent, have failed to keep up with inflation over time.

Over the next 20 years, the state must find a consistent and adequate funding source for transportation. Nationally, Wisconsin is unique in its revenue structure, depending almost exclusively on fuel taxes and registration fees to fund its transportation programs. Many other states use at least some portion of their General Purpose Revenue (GPR) funding for transportation-related purposes,

In 1978, transportation funds supported...

- state highways;
- general transportation aids;
- transit operating assistance;
- specialized transit;
- specialized road aids;
- railroad facilities acquisition;
- airport development;
- motor vehicles;
- state patrol; and
- 9 programs in other agencies.

In 2000, the funds support...

- **all of the WisDOT programs of 1978, plus...**
- local roads;
- local bridges;
- railroad and harbors;
- transportation economic assistance;
- inspection-maintenance; and
- 7 programs in other agencies.

particularly in the case of non-highway modes such as public transit. This is not true in Wisconsin. Over the past few years it has become apparent that with such a narrow revenue base, transportation funding is very susceptible to inflation and has been stretched too thin to meet the many needs of our transportation system.

The funding necessary to meet state transportation system needs will continue to increase. Although we need a transportation system that provides people with a choice of travel, highways will still serve the vast majority of our population's transportation needs. Just to address essential needs, such as expanding the system to try to relieve existing congestion problems, will require commitment of all the funding estimated to be available for expansion through 2007. In addition, funding the major freeway projects in southeastern Wisconsin, while still addressing the needs of the rest of the state, will put a significant strain on existing sources of transportation revenue.

In the future, perhaps an even greater challenge will be trying to determine the right funding mix to further integrate our transportation system

(i.e. highways, buses, rail, bikeways, pedestrian accommodations, etc.). It is a constant struggle for the state to determine the appropriate combination that will best suit the needs of both urban and rural residents.

Protecting the environment

When making short- and long-term transportation decisions, it is essential that environmental concerns are adequately addressed. This includes measures to reduce the affects on air quality and energy consumption; minimize negative impacts on agricultural lands, wetlands, and wildlife; and better manage stormwater run-off from transportation facilities. Additionally, transportation improvements and community development decisions must be coordinated, and the impacts that each have on the other must also be considered.

Those involved in making transportation decisions must work with communities to make sure that the transportation system does not create barriers that separate neighborhoods or significantly increase noise levels. They must also work to provide more aesthetically pleasing transportation facilities that fit in with surrounding architecture. It is critical that we strive to balance the social, financial, and environmental costs with the benefits of transportation improvements.

Everyone believes that protecting the environment is the right thing to do, but we also need to realize that these efforts do add cost to improving the transportation system.

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All photographs and graphics provided by WisDOT unless otherwise noted.

Website: www.dot.state.wi.us
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